

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Incentive Auction Task Force and)	MB Docket No. 16-306
Media Bureau Seek Comment on)	
Post-Incentive Auction Transition on)	GN Docket No. 12-268
Scheduling Plan)	
)	

JOINT COMMENTS

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October 31, 2016

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SUMMARY

Cox Media Group, Cordillera Communications, and Meredith Corporation (collectively the “Joint Broadcasters”) appreciate the difficult task facing the Incentive Auction Task Force (the “IATF”) as it plans for the 39-month post-auction transition. Given the significant challenges of this unique undertaking, it is plain that the IATF’s focus in planning the transition should be the goals the public will value most: ensuring that (1) television viewers are not disenfranchised and (2) the transition is undertaken safely, without accidents that result in property damage, injury or loss of life. With these two primary goals in mind, the Joint Broadcasters urge the IATF to revise its model as follows.

First, the Commission should re-order its objectives so that clearing the 600 MHz band is the last objective to be considered in the Phase Assignment Tool. To best protect service to viewers and the safety of tower workers and people who live in close proximity to towers, the two primary objectives should be to maximize the health and safety of tower crews and the homes and businesses that are in close proximity to towers and to minimize service disruptions to viewers and users of other services that share broadcast towers. Only after these and other objectives are met should the Commission prioritize assigning U.S. stations whose pre-auction channels are in the 600 MHz band to earlier phases of the repack. Reordering these objectives will afford more flexibility to stations in developing the transition period schedule and will reduce the chances that viewer service will be interrupted.

Next, the Commission must include additional variables when building its model, such as the expected weather at a station’s tower site, RF complications at tower farms, and constraints caused by fully-loaded towers. Contrary to statements made by IATF staff, weather factors other than wind must be considered, as towers in some parts of the country are virtually inaccessible to

heavy equipment during the winter months of the year, and crews in other parts of the country must plan their work around weather events such as ice storms and hurricanes. Similarly, IATF staff should not underestimate the complexities involved when stations whose equipment is located in a tower farm or on a fully loaded tower try to plan their post-auction channel moves. These stations will need sufficient time to coordinate with all other licensees (television, radio, mobile wireless and public safety) on their tower and in their antenna's RF field. Further, for the work to be conducted safely, all stations near the tower will need to either reduce their power or shut down their service. The model must consider this issue and allow time for stations to either construct temporary auxiliary facilities or to stretch out the work so that it can take place at night, during "off" hours, when other licensees will be willing to power down their own antennas.

The Commission also should lift the prohibited communications rule when it sends broadcasters their confidential letters with their post-auction channel assignments. Once all bidding is over for broadcasters, no public interest purpose will be served by maintaining the prohibited communications rule on the broadcast industry side. Broadcasters need to be able to discuss their post-auction channel placement with others in the industry in order to begin their transition planning. The sooner they can begin their planning, the smoother the transition will be for viewers, broadcasters, and the Commission itself.

Finally, the IATF must explain what will happen if stations in a phase are unable to meet their construction deadlines. The Commission should clarify whether stations in each phase that have not constructed on time (perhaps through no fault of their own) will be forced to go dark while the transition continues around them, or whether the transition for the entire linked-station set may be delayed until all stragglers catch up. Keeping in mind that dark stations mean that service to viewers has been disrupted, the Commission must also explain how it will assist

stations in getting back on the air given the difficulty in obtaining needed resources during the transition period.

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JOINT COMMENTS

Cordillera Communications, (“Cordillera”), Cox Media Group (“CMG”), and Meredith Corporation (“Meredith”) (collectively, the “Joint Broadcasters”),¹ hereby submit these comments in response to the Public Notice issued on September 30, 2016, by the Incentive Auction Task Force (the “IATF”).

I. INTRODUCTION

The IATF has requested constructive suggestions on how to improve its proposed transition process.² After reviewing the materials provided to the public by the IATF, the Joint Broadcasters have serious questions about whether the plan laid out in the *Public Notice* can accomplish the Commission’s goal of clearing the 600 MHz spectrum repurposed for wireless operations within the 39-month timeframe currently required by the Commission’s rules. Indeed, the Joint Broadcasters are concerned that any plan, however well-conceived or designed,

¹ The Joint Broadcasters together own and operate 38 television stations in 30 markets across the country.

² Incentive Auction Task Force and Media Bureau Seek Comment on Post-Incentive Auction Transition Scheduling Plan, *Public Notice*, DA 16-1095 (rel. Sept. 30, 2016) (the “*Public Notice*”); *see also* *Post-Incentive Auction Scheduling Plan Webinar*, FCC (Oct. 17, 2016), <https://www.fcc.gov/news-events/events/2016/10/post-incentive-auction-scheduling-plan-webinar> (the “*Scheduling Plan Webinar*”).

will be challenged to accomplish the monumental task of the post-auction transition in a mere 39 months without serious flexibility for licensees and without the ability of the Commission to address problems as they arise.

That said, the Joint Broadcasters appreciate the difficulty of the IATF's task and applaud its diligence in developing a plan for the transition that seeks to accomplish the Commission's directives. In the spirit of helping refine and improve IATF's plan, the Joint Broadcasters offer here their reflections and insights on the difficulties that carrying out the plan would create and solutions to those concerns. The Joint Broadcasters remain concerned that, without a reordering of priorities and additional flexibility, the current proposal would create potential disruptions to television and other services to consumers, as well as significant potential safety hazards both to tower crews and the general public. The Joint Broadcasters' aim is to help solve these problems, and so offer herein constructive suggestions for how the plan might be improved in these and other areas.

II. IN THE INTERESTS OF TELEVISION SERVICE CONTINUITY AND PUBLIC SAFETY, IATF SHOULD CONSIDER REORDERING ITS TRANSITION PRIORITIES TO REFLECT THE CHALLENGES AHEAD.

The *Public Notice* establishes the priorities that the Commission's model will use to determine transition phase and timing assignments for broadcasters, with clearing the 600 MHz spectrum as quickly as reasonably possible defined as the first objective.³ The Joint Broadcasters respectfully suggest that making clearance of the 600 MHz band the first objective of the transition would not be the wisest choice. Rather, the primary goal(s) should be preventing viewer disruptions while minimizing the risks to public health and safety. Given the

³ See *Public Notice* at ¶ 20.

significant challenges of this unique undertaking, the Commission has and should take the time to get the transition right for everyone – TV viewers, broadcasters, and wireless providers.

To best further the public interest, the Joint Broadcasters propose that the order of objectives governing the transition should be to:

- 1) maximize the health and safety of tower crews and the homes and businesses that are in close proximity to towers;
- 2) minimize service disruptions to viewers and users of other services sharing broadcast towers;
- 3) minimize the number of linked-station sets;
- 4) minimize the difference between the number of stations in the largest transition phase and the smallest transition phase; and
- 5) minimize the sum of the number of times TV viewers in a DMA must rescan.

Only after these objectives are met should the Commission prioritize assigning U.S. stations whose pre-auction channels are in the 600 MHz band to earlier phases of the transition.

Reordering these objectives will afford more flexibility to stations in developing the transition period schedule and will better serve the public interest.

III. THE COMMISSION SHOULD CAREFULLY CONSIDER THE EXTENT TO WHICH IT OR BROADCASTERS CAN CONTROL THE PRIORITIZATION OF CRITICAL RESOURCES DURING THE TRANSITION.

The Joint Broadcasters appreciate the resource allocation challenges the IATF is facing in designing a model that will allow the Commission to schedule the post-auction transition. The resources necessary for a safe and successful transition – particularly tower fabrication capacity, tower crews, antenna manufacturing capacity, and engineering know-how – are in short supply. Those resources have never been called upon to accomplish the massive transition task in the short time envisioned by the Commission.

Moreover, these resources likely will not respond well to the stresses inherent in the three-year transition timetable. Antenna selection and manufacturing is specialty work that does not lend itself to one-size-fits-all mass production. Tower work is inherently risky and prone to delays. Problems in these areas threaten to disrupt viewer service and frustrate consumers, causing broadcasters both relationship and economic harm. For these reasons, broadcasters are extremely careful in choosing their vendors.

The IATF's model, on the other hand, assumes items like antennas and resources like tower crews are fungible. They are not – broadcasters have prior relationships and current contractual obligations. Some broadcasters – including CMG – even have ownership interests in tower or equipment companies. The problem with assuming that these resources are fungible is that it could lead to broadcasters being forced to choose between constructing their facilities on time or utilizing vendors they deem to be inferior to their chosen preferred vendors. A model that forces that situation to happen will not best serve consumers or the public interest.

The IATF's model also may need to take greater account of the conflicts between broadcasters likely to be caused by the transition. Supply and demand are unlikely to fit the neat linear models the Commission envisions. There is no reason to expect that all broadcasters will wait their turn in line to get access to scarce resources, or that manufacturers will fill orders in keeping with the IATF model. For example, manufacturing constraints may make it difficult for vendors to fill orders in any manner other than first-come, first-served. In some cases, vendors may be obligated to give preference to customers with prior contractual relationships, including broadcaster customers who own the company, such as Sinclair's ownership of antenna maker Dielectric. The IATF should not attempt to interfere with private contractual relationships that have developed in a competitive market. These contractual obligations and manufacturing

constraints may make it difficult for some stations to obtain their equipment in a timely manner. There is an inherent “lumpiness” in the allocation of resources for the transition, and it is no solution to just assume that broadcasters and manufacturers will have to work it out.

These conflicts are also highlighted by situations where stations will need to construct while dealing with outside constraints they cannot control, such as the weather. For example, during the *Scheduling Plan Webinar* that the Commission hosted to explain the transition model, Commission staff stated that stations should only try to get resources according to their place in the queue but they also said that stations that may encounter problems with the weather are encouraged to construct early.⁴ Since constructing early would disrupt the resources available to others in the queue, that seems unlikely to be the solution the Commission wants licensees to pursue.

IV. THE JOINT BROADCASTERS RECOMMEND FACTORING LIKELY WEATHER-RELATED DELAYS INTO THE PHASE-ASSIGNMENT PROCESS.

Weather is a far greater obstacle than Commission staff seems to appreciate.⁵ For example, for several months every year, snow can make towers in some parts of the country virtually inaccessible to the heavy equipment needed to safely conduct tower work. The transmitter/tower sites for Cordillera’s Montana stations (KTVH, KBZK, KXLf and KRTV) all have roads that are generally accessible only by snow cat or a snowmobile between the months of November-May. That means serious tower construction will be impossible during those months.⁶

⁴ See *Scheduling Plan Webinar*.

⁵ See *id.* (suggesting wind is the main weather concern for tower construction crews).

⁶ Exhibit A provides an overview of the challenges Cordillera’s Montana stations will face due to weather constraints.

Ice also is a significant concern. Ice famously brought down two tall towers in North Carolina less than 20 years ago,⁷ and it can delay or preclude construction in many parts of the country for weeks on end. Hurricanes and other forms of severe weather also are likely to delay the schedules as tower rigging must be secured before a storm and then crews must have time to return their equipment to operational status.⁸ CMG's stations in Orlando and Jacksonville anticipate hurricane and other storm-related delays, yet the current schedule provides no tolerance for this.

As these examples show, weather constraints should be considered and included as an input into the model. One option would be to allow the model to self-adjust based on when "Month 0" actually is during the calendar year. For example, in the IATF's slides from the *Scheduling Plan Webinar*, the stations that will need to transition during Phase 2 of the 114 MHz example include stations in Montana, upstate New York, the upper peninsula of Michigan, and stations in the Oregon/Washington/Idaho mountain ranges.⁹ Given that these stations are in an early Phase of the transition, this schedule will be feasible only if those stations do not need to construct, test or transition during the winter months when they will face hazards from snow and ice. Accordingly, if "Month 0" is April or May, the schedule may work. If "Month 0" is January or February, the schedule will not. The IATF's model should take this into account.

⁷ See, e.g., Pam Allen, *Inside WRAL: The Day the Broadcast Tower Fell*, WRAL.com (Dec. 7, 2014), <http://www.wral.com/inside-wral-the-day-the-broadcast-tower-fell/14249377/>.

⁸ See, e.g., *System Status*, South Carolina ETV, <https://scetv.org/system-status> (discussing the status of the Charleston SCETV antenna while trying to work on the tower in late summer during a period of tropical storms and Hurricane Matthew).

⁹ *Transition Scheduling Plan Webinar Slides*, FCC at 40 (October 17, 2016), <https://www.fcc.gov/sites/default/files/Transition%20Scheduling%20Plan%20Webinar%2020161017.pdf>

V. THE TRANSITION MODEL SHOULD BE DESIGNED TO AVOID – IF NOT PRECLUDE – SERVICE BLACKOUTS.

Viewers of the IATF's October 17, 2016 "Transition *Scheduling Plan Webinar*" (the "*Scheduling Plan Webinar*") were alerted early on that the methodology the IATF proposes to set post-auction transition schedules for television broadcasters has a high likelihood of resulting in service blackouts to viewers. On page 8 of the *Scheduling Plan Webinar* slides, the IATF explains that the transition schedule will be set by using the Phase Scheduling Tool and then looking at the "average time to complete each phase" of the transition.¹⁰ By definition, the use of "average" timing in any modeling will result in some stations missing their deadlines, as some stations will have longer (and some will have shorter) timing. Rather than using an "average" to determine timing, the IATF should use the longest timing estimates for all stations in a phase or some stations will fail to construct on time and may be forced off the air.

Similarly, the model should not presume that resources can remain at capacity throughout the transition period. Rather, it must assume that manufacturing slow-downs, tower-crew delays, and other resource shortages will occur. Blackouts will result if timing cushions are not built into the model. If, for example, construction of a station turns out to be more difficult than expected and runs behind schedule, the model should have mechanisms to accommodate such delays. Otherwise, the delayed construction will be halted while it is still incomplete so that the tower crew can move on to the next station according to schedule. This result would be inefficient and leave the delayed station with no feasible way to complete construction in a timely fashion. Given the complexities the transition model envisions with its large numbers of

¹⁰ *Id.* at 8.

“linked-station sets,” the parameters of the model should be set to account for these types of problems.¹¹

The IATF also should explain what the Commission plans to do if stations in linked-station sets cannot coordinate testing, either because of uncooperative owners or because one party is unable to meet the construction deadline. While the median size of a linked-station set is 3 stations, coordination problems should be expected, especially as linked-station sets can be as large as 125 stations.¹² The Commission should clarify whether stations that have not constructed on time (perhaps through no fault of their own) will be forced to go dark while the transition continues around them, or whether the transition for the entire linked-station set may be delayed until all stragglers catch up.¹³

Similarly, many stations cannot add new antennas to their towers without removing some other equipment first – either their own equipment or the equipment of others. Indeed, many towers are shared by television, radio, cellular telephone and public safety licensees. Television broadcasters will need to coordinate with all licensees on a tower when changing

¹¹ The Joint Broadcasters agree that the Commission should not require use of temporary channels, but they also urge the Commission to permit their use if needed to avoid service disruptions and station blackouts. If temporary channels are used, they should be “close” in number to a station’s final channel so that equipment can be reused. Also, the Commission should make all efforts to have the use of a temporary channel be as brief as possible because temporary channels may interfere with and displace LPTV channels and TV translators, which will result in further disruption to viewers.

¹² *Public Notice* at 8, Table 1.

¹³ Broadcasters also need more details on how the transition will impact low power television stations and television translators. Both LPTV stations and TV translators are used by stations to provide vital over-the-air service to viewers and to provide signals to cable headends and satellite receive locations. Shutting down these facilities will cause potentially dramatic service losses to over-the-air viewers and MVPD subscribers. The IATF should explain when broadcasters will be notified about the post-auction status of LPTV stations and TV translators and detail the coordination responsibilities of stations so that LPTV stations and TV translators can remain on the air to the longest extent possible.

channels and must be provided the time (and the compensation) necessary to reimburse other licensees for the necessary disruption to their operations. The IATF model must address the blackouts that will be necessary for these stations to change channels and provide incentives for radio stations, cellular licensees and public safety licensees (or television stations in later phases) to cooperate with the transition when they are required to turn down (or turn off) their signals so that the necessary work can be performed.¹⁴

The Joint Broadcasters believe that the risks of significant service blackouts are very high with the current model. If station blackouts occur during special events programming, such as the Super Bowl, the Olympics, Presidential Debates, or the Oscars, or even during “must see” dramatic or situation comedy programming during market sweeps, viewers (and Congress) will blame the Commission. Especially given the demonstrated lack of interest by the wireless industry in quickly acquiring the former broadcast industry spectrum, the Commission should consider reconfiguring many of its assumptions and re-ordering its objectives to reduce the likelihood of substantial service outages.

VI. THE COMMISSION SHOULD CLARIFY ITS BASELINE ASSUMPTIONS ABOUT RESOURCE CONSTRAINTS.

When modeling the transition, it is supremely important that the IATF assign transition tasks to the proper stage and designate all scarce resources as “constrained.” For example, when discussing the work that can take place during the Pre-Construction Stage, the Public Notice says that Pre-Construction can include “possible structural tower improvements.”¹⁵ This is unlikely

¹⁴ The IATF model also is silent on the problems that may arise if stations are forced to shut down and how that will impact the Emergency Alert System. The IATF should consider and explain how service disruptions will affect the EAS, and how the Commission will make sure that public health and safety are not put at risk by station blackouts.

¹⁵ *Public Notice* at Appendix A, ¶38.

to be the case. For safety reasons, only qualified tower crews should be working on tower alterations. Accordingly, for resources to be used efficiently (and safely), the model should show that tower alterations and installations are all part of the same job. Similarly, the IATF should confirm that for purposes of separating the Pre-Construction Stage from the Construction Stage, the demarcation point should be the wall of the building that houses the transmitter site equipment and not the base of the tower. Again, for safety and quality control purposes, the transmission line to the tower base is normally installed by the tower crew and not by some other vendor.

The model also appears to overestimate the amount of time-savings that can be achieved by performing multiple installations on the same tower in a single, multi-station job.¹⁶ Multiple installations on one tower take nearly as long as multiple installations on separate towers. Reduced travel times create a modest time savings, but there is little if any time savings on construction itself. This is because, in most instances, the tower will need to be re-rigged multiple times to work on the different antenna installations. Valuable time will be saved by having the same crews perform these re-riggings and construction projects sequentially – just not as much time as the Commission presumes. Timing estimates for multi-station towers should be assumed at 100 percent for the first station, 90 percent for the second station, and 80 percent for any additional stations. Encouraging tower crews to work more quickly than this will cause schedule delays at best (as tower crews will not finish their work on time and so will be delayed in arriving at their next location) and potentially cause catastrophic accidents at worst.¹⁷

¹⁶ See, e.g., *Public Notice* at Appendix A, ¶50.

¹⁷ See, e.g., *infra*. Section VII.

Similarly, the model should reflect that crews will need adequate time to perform tasks such as rebuilding candelabra antennas, installing multiple temporary antennas, and moving other tenants (such as FM radio stations). Allowing – as the IATF model currently does – only one week for a tower crew to install an auxiliary antenna is likely to be insufficient.¹⁸ Further, the model should account for the special problems and timing needs of broadcasters that operate from fully loaded towers (and the Commission should ask broadcasters for this information).

As demonstrated by Exhibit B, CMG’s fully-loaded tower in Jacksonville, Florida will require special attention because there is simply no way to maintain service from the old tower while constructing new facilities. The tower cannot accommodate additional main antennas, and there is literally nowhere on the existing tower to place suitable auxiliary facilities. This means that auxiliary facilities will need to be established at a separate location before the station’s old main antenna can be removed from the tower and replaced with the new one. CMG will not be alone in pursuing this type of simultaneous construction at multiple locations, and the IATF’s model should account for this possibility. Indeed, the prudent course would be for the Commission to seek from broadcasters information regarding these types of complex build-outs *prior to* assigning stations to a transition phase and building that information into the model.

Moreover, the model also should account for the time needed to coordinate transition efforts at tower farms, where many stations (including non-broadcast stations) may need to pool resources to ensure that the transition happens safely with a minimum of disruption to television viewers, radio listeners, cell phone users, and public safety entities. For example, the attached Exhibit C discusses the issues raised for Meredith’s Phoenix, Arizona station KPHO due to its antenna placement at a single location along with nearly all Phoenix broadcasters. While

¹⁸ See *Public Notice* at ¶50.

antenna farms will allow for some construction efficiencies, they also present the most acute dangers of large-scale service disruption due to the need to maintain a safe RF environment for tower workers. The difficulties could lead to delays and need to be considered prior to assigning stations to construction phases.

Resource constraints also must be properly addressed. For example, the Public Notice states that the model assumes sufficient capacity in auxiliary antenna manufacturing such that resources will be available to meet demand.¹⁹ There is no basis for assuming this will be the case. The same companies that manufacture main antennas provide broadcasters with auxiliary antennas as well. If these manufacturers are straining their own capacity to meet the demand for main antennas, they are unlikely to have the spare capacity to produce a sufficient number of auxiliary antennas to meet demand. The limited capacity of antenna manufacturers, coupled with constraints on material inputs like copper for transmission lines and steel for towers, should be considered and addressed by the model.

Stations also have concerns about the long timeline needed to replace older equipment, such as tube transmitters. This type of equipment is expected to experience a high failure rate if a station attempts to retune it to a new channel and some older equipment might not be re-tunable at all. For example, all of the Cordillera stations have older GatesAir transmitters and RF systems. The information Cordillera has received from the manufacturer indicates that their retuning choices may be either a period of prolonged blackouts, if they try to change channels using the old tube technology, or they can switch to the new ultra-wideband modules that will allow for on-air replacement, but only if the reimbursement model allows for this type of

¹⁹ See *id.* at Appendix A, ¶ 39.

equipment change. Accordingly, the IATF transition model must capture if a station is using older technology because replacing that equipment will not be a quick or easy process.

Constraints from other governmental agencies must also be recognized and addressed. For example, the inputs to the model should give more time to stations whose towers are located in states and jurisdictions that are known to delay tower permits and zoning variations. The model also should allow more time for stations on towers owned by small business owners or municipalities. The model must also account for FAA application processing and consider whether stations that are waiting for grant of FAA approvals will slow the transition process. Indeed, to avoid the very real risk that the FAA approval process will create a bottleneck that will disrupt the transition, the Joint Broadcasters urges the Commission to reach an agreement (that should be made public) with the FAA whereby the FAA pledges that it will be ready to swiftly grant needed broadcaster approvals.

The model also should account for variables that relate to a station's final channel assignment. Neither the IATF nor the stations will know with certainty whether or not they face a difficult build until after the new channel assignments are released and made publicly available. For example, it is a very different situation if a station moves from channel 46 to channel 28 vs. channel 16 – lower channels require heavier equipment and so a tower that could support a move to channel 28 may not be able to support a move to channel 16. The IATF model should be designed to adequately capture these sorts of variables, as final channel assignments will directly dictate whether additional tower work will be necessary to make many towers compliant with current safety standards.

VII. PUBLIC HEALTH AND SAFETY COULD BE AT RISK IF BROADCASTERS ARE FORCED TO USE INFERIOR MATERIALS OR IF TOWER CREWS ARE STRETCHED TOO THIN.

The issue of tower safety must be adequately addressed at the Phase Assignment stage. Secretary of Labor Thomas E. Perez and Federal Communications Commission Chairman Tom Wheeler have publicly recognized the dangers involved with the construction and maintenance of communications towers.²⁰ Indeed, following series of serious accidents over a short few years, the Department of Labor and the Commission formed a joint working group to develop recommended practices for employers.²¹ These actions were taken after encountering serious problems with the construction of predominantly short, comparatively simple cell towers. Construction of and on tall broadcast towers is exponentially more complex and dangerous. The post-incentive auction transition will test the abilities of tower workers and companies and stretch them to their limits. The Commission must consider the impacts its proposed schedule will have on the tower industry and do all it can to create a timeline that will not exacerbate this inherently dangerous work.

Numerous television towers are in populated urban and suburban areas and those towers overshadow schools, hotels, apartment complexes, homes and businesses. For example, the 232-meter Hughes Memorial Tower on Georgia Avenue in Washington, DC overshadows a school and numerous homes and businesses. Despite the generally moderate DC winter climate, during

²⁰ Thomas E. Perez and Tom Wheeler, *Safety and Broadband Must Go Hand in Hand*, FCC Blog (Oct. 15, 2014, 12:11 PM), <https://www.fcc.gov/news-events/blog/2014/10/15/safety-and-broadband-must-go-hand-hand>; *see also* Letter from Senator Bill Nelson to Chairman Tom Wheeler, dated Oct. 9, 2014, <http://wireless.fcc.gov/presentations/SenatorNelsonLtr.pdf> (supporting FCC and DOL staff exploration to improve tower climber safety) (“*Senator Nelson Letter*”).

²¹ *See, e.g., Workshop on Tower Climber Safety and Injury Protection*, FCC (Oct. 14, 2014), <https://www.fcc.gov/news-events/events/2014/10/workshop-on-tower-climber-safety-and-injury-protection> (“*Tower Safety Workshop*”).

the winter months, the police “frequently have to close the streets next to this tower because of the risk[s] posed by falling ice” to persons and property in the surrounding area.²² Accordingly, while tower crews are potentially imperiled from hazardous weather conditions when working on towers in rural areas, the general public is additionally at risk when the towers are in urban or suburban areas.²³ Should an accident occur due to the use of inferior materials or due to tower crew haste or fatigue, the result could be disastrous.

Concerns about injuries or fatalities related to broadcast television towers are real concerns.²⁴ The Occupational Safety and Health Administration (“OSHA”) reports that there were 107 incidents involving communication towers from 2003 through 2013.²⁵ Those incidents resulted in 91 fatalities (79 from falls and 8 from structural collapses) and 17 injuries.²⁶ Unfortunately, incidents specifically involving television tower collapses occur more frequently than desired. For example, in 1982, five tower workers were killed and three men on the roof of an adjacent business building were injured when the tower they were working on collapsed after

²² *Radical Radio Tower*, Ambivalent Images (Jan. 11, 2016), <http://mowabb.com/aimages/archives/006618.html>.

²³ See, e.g., Google Maps, (<https://www.google.com/maps/@30.2808577,-81.5700259,378m/data=!3m1!1e3>) (providing overhead view of a Jacksonville, FL tower and nearby homes and a church); Google Maps, (<https://www.google.com/maps/@42.3032088,-71.2181614,325m/data=!3m1!1e3>) (depicting overhead view of a Boston, MA tower and nearby businesses); Google Maps, <https://www.google.com/maps/@33.7648849,-84.3616256,19z/data=!3m1!1e3> (portraying overhead view of an Atlanta, GA tower and nearby homes and businesses).

²⁴ See, e.g., *Senator Nelson Letter*; see also *Tower Workshop Letter*.

²⁵ Communication Tower Safety, Occupational Safety and Health Administration, *Request for Information*, 80 Fed. Reg. 20,185 (Apr. 15, 2015). A list of the incidents is available at <https://www.regulations.gov/document?D=OSHA-2014-0018-0002>.

²⁶ Communication Tower Safety, 80 Fed. Reg. at 20,186.

an antenna fell and severed a guy wire.²⁷ In 1989, two television towers collapsed after freezing rain placed too high a load on the towers.²⁸ In 2008, a 2,000 foot television tower collapsed for unknown reasons.²⁹ Fortunately only one person was injured in the incident.

Tower work's inherent risks would be compounded in the event that tower crews are rushing to fulfill overly ambitious schedules. Indeed, OSHA reviews of incidents involving cellular towers have shown that overly ambitious deadlines have been the cause for multiple incidents.³⁰ Unreasonably short construction deadlines resulted in tower crews working for unreasonably long days and nights, a situation where fatigue resulted in tower-related accidents.³¹ Moreover, the risks associated with the installation and maintenance of broadcast television antennas is exacerbated by the fact that the towers used to broadcast television signals are often much taller and much more complex than other communications towers.

Resource constraints, such as copper for transmission lines and steel for antennas, also create risks that manufacturers will produce sub-standard equipment if they are forced to use sub-standard materials. As discussed in the Commission's Workshop on Tower Climber Safety and Injury Protection, tower collapses are occurring more frequently – often as a result of faulty construction or maintenance of communications towers.³²

²⁷ Associated Press, *5 Workers Hurlled to Deaths as a Texas Tower Collapses*, The New York Times (Dec. 8, 1982)), <http://www.nytimes.com/1982/12/08/us/5-workers-hurlled-to-deaths-as-a-texas-tower-collapses.html>.

²⁸ Pam Allen, *Inside WRAL: The Day the Broadcast Tower Fell*, WRAL.com (Dec. 7, 2014), <http://www.wral.com/inside-wral-the-day-the-broadcast-tower-fell/14249377/>.

²⁹ Associated Press, *KATV Little Rock Tower Falls, 1 Injured*, TVNewsCheck, (Jan. 11, 2008, 3:14 PM), <http://www.tvnewscheck.com/article/18890/katv-little-rock-tower-falls-1-injured>.

³⁰ See *Tower Safety Workshop* at 41:20.

³¹ See *id.*

³² See *id.* at 48:32.

VIII. THE COMMISSION SHOULD LIFT THE PROHIBITED COMMUNICATIONS RULE AS TO BROADCASTERS WHEN IT SENDS THE CONFIDENTIAL LETTERS WITH POST-AUCTION CHANNEL ASSIGNMENTS.

Given the inherent challenges the television broadcasting industry will face in its attempt to meet the 39-month transition period deadline, the Joint Broadcasters appreciate the Commission's efforts to provide broadcasters with their post-auction channel assignments as quickly as possible. The Joint Broadcasters agree that once the auction's final stage rule is satisfied, there is no need to wait to determine the final television channel assignment plan.³³ If, however, the Commission intends to "give broadcasters additional time for post-auction transition planning,"³⁴ it must lift the auction's prohibited communications rule at the same time that the post-auction channel assignment confidential letters are sent to the stations.³⁵

Once all bidding is over for broadcasters, there is no public interest purpose in continuing to subject broadcasters to the prohibited communications rule. At that point, there will no longer be any bidding on which they could possibly collude. Lifting the anti-collusion restrictions at the point when no collusion can occur will help effectuate the transition, because broadcasters will then be able to discuss their transition plans with other broadcasters in their markets without fear of violating the rules. For example, all of the television stations in the Boston market, home to CMG's WFXT-TV, are situated on three different towers at nearby tower sites, and those stations will need to coordinate their transition activities. Without talking to each other, and without knowing who will be on which channel, these stations cannot begin meaningful planning.

³³ See *Public Notice* at ¶¶ 6, 7.

³⁴ See *id.* at ¶ 7.

³⁵ See 47 C.F.R. § 1.2205(b)(1).

IX. CONCLUSION

Safely maintaining service to viewers should be the primary goal for the IATF when formulating its transition period methodology. The television broadcasting industry and the Commission have a common interest in ensuring that the transition goes forward smoothly, without widespread viewer blackouts and without a serious tower accident. The Joint Broadcasters therefore urge the IATF to adjust its model consistent with the comments herein.

Respectfully submitted,

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October 31, 2016

EXHIBIT A

Cordillera has transmitter sites on XL Heights at approximately 8,400 feet and Green Mountain in Bozeman at approximately 6,900 feet. Travel to these sites is restricted to 4-wheel drive vehicles and snowmobiles from mid-November to the end of May. Getting any heavy equipment to these sites during the winter months will be problematic and dangerous.

Below is an example of access to the XL Heights sites.



KTVQ's transmitter site is located at 1700 Colburn Road in Billings, Montana. All but the last ¼ mile is a paved and maintained road. The transmitter site is accessible by 4-wheel drive vehicle most of the winter, but the last hill leading to the site is quite steep and can be problematic. The site is not accessible by anything other than 4-wheel drive vehicles during the winter months.

Cold weather is more of an issue in Billings. Below-zero temperatures are not unusual during the winter in this area. Wind chill will bring that temperature far below zero. Tower work is very difficult during the winter months in this area.

The following two photographs show the Billings site in the summer, when all tower work must be done.

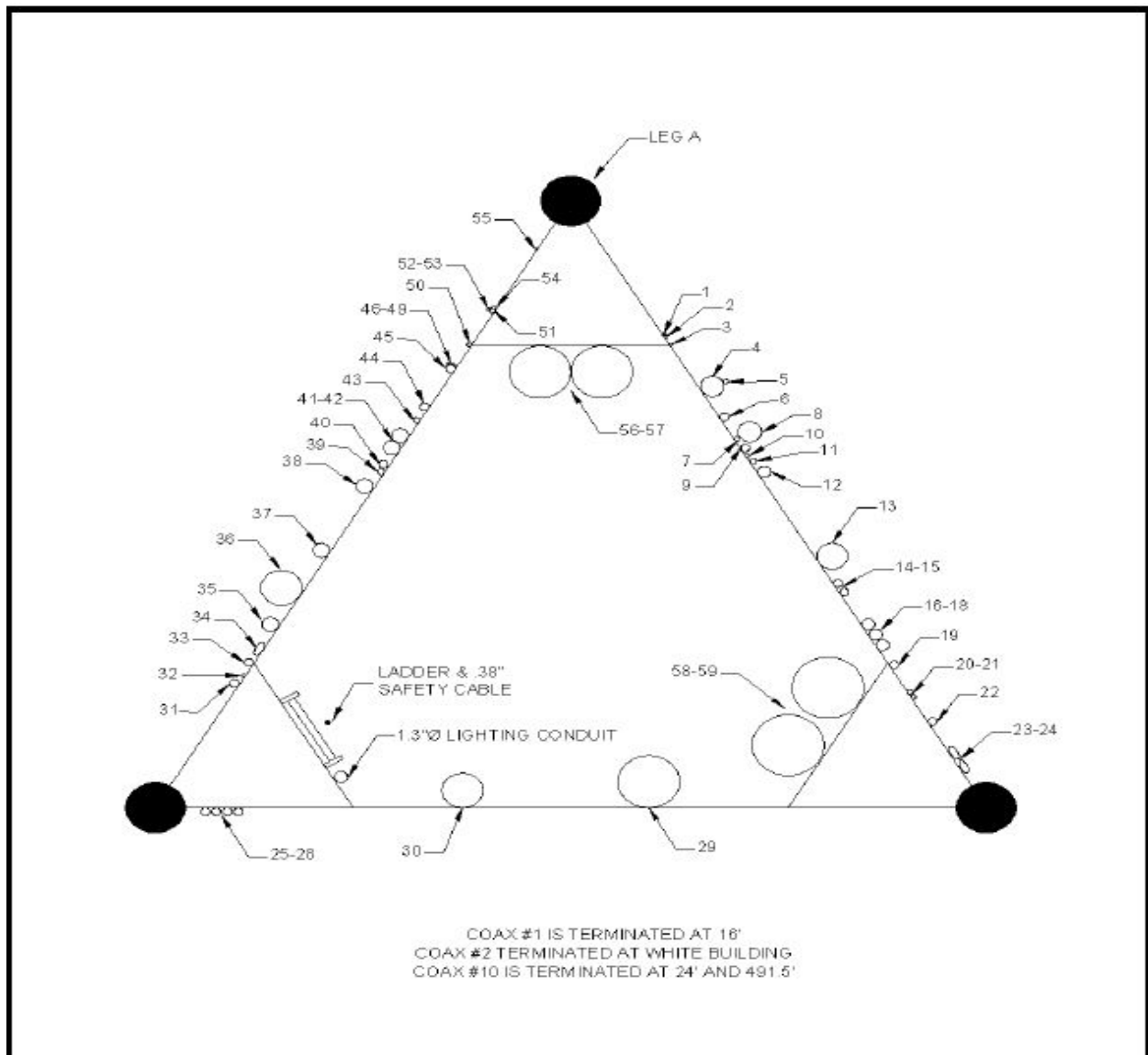


EXHIBIT B

JACKSONVILLE TOWER PROJECT

In Jacksonville, Florida, the antenna for CMG's WFOX is currently housed on a leased tower that hosts facilities for several different types of services, including TV, FM radio, commercial wireless radio, and emergency ambulance communications. Fully loaded towers like this one create several difficulties for planning construction in the event that WFOX is assigned a new channel in the TV transition.

The following schematic drawing shows a cross section of the tower indicating the placement of each of the transmission lines attached to antenna that are situated on the tower. Each of these lines represents a tower user that will have to be accommodated to permit any transition-related work on the Jacksonville tower.



The following photograph illustrates the challenges that any tower crew will face in navigating the many attachments to this tower. Moreover, as the picture shows, the density of transmission lines presents a nearly solid face to the wind, further complicating calculations about tower stress and permissible loading.



This photograph shows the tower face with the line feed from the bottom, *i.e.*, where the tower crew would begin its ascent. The complicated nature of work on a tower this heavily loaded – both from an engineering and safety standpoint – cannot be overestimated or overstressed. The Commission must ensure that tower crews are given an adequate amount of time to perform the complex tasks required by towers like this one.



The following charts show the large number of antennas and other appurtenances that already are on the tower. As the charts show, tower users include CMG's Fox 30 (WFOX), several other radio and television broadcasters, wireless providers, and public safety entities.

APPURTENANCES

Antenna elevations are measured from mid-rad on all antennas. Elevation on mounts are measured to the mid-elevation of the point where the mount attaches to the tower. Antennas are listed from highest mounted position to lowest mounted position on tower.									
Antenna Elevation	Qty & Type	Manufacturer	Model or Size	Coax #	Coax Qty & Size	Mount Elevation	Mount Qty, Size and Type	Carrier/ Notes	Mounting Location
960'	(1) 10-Bay FM	Unknown	10-Bay FM	29	(1) 6"	923'	(1) Standoff (12')	Fox 30	CA Face
937'	(1) FM	Dielectric	TFU-26GBH	56-57	(2) 6"	923'	(1) Standoff (12')		BC Face
936'	(1) FM		THV-6A7C140	58-59	(2) 7"	923'	(1) Standoff (12')	WJCT	AB Face
923'	(1) Yagi	Unknown	96" x 36"	33	(1) 7/8"	923'	(1) Standoff (24")	WJNJ	
925'	(2) Strobes	Flash Tech	FH 307-1	(1) Light Conduit		924'	(2) Standoffs (17")	SBA	Legs A&C
922.5'	(1) Strobe		20" x 20" x 12"	(1) Light Conduit		922.5'	Direct Mount		Leg B
920'	(2) Strobes		20" x 20" x 12"	(1) Light Conduit		920'	Direct Mount		Legs A&C
909.5'	(1) Weather Vane	Unknown	30"ø	39-40	(1) 5/8" (1) 7/8"	907.5'	(1) Standoff (36")	Fox 30	Leg A
900'	(1) 2-Bay FM	Unknown	2-Bay FM	30	(1) 4"	900'	(1) Standoff (12")	Budd Broadcasting	Leg C
824'	(1) 12-Bay FM	Dielectric	DCRM10B75P	36	(1) 4"	824'	Direct Mount		
756'	(1) Omni	Unknown	12' x 2"ø	12	(1) 1-1/4"	750'	(1) Standoff (84")	Inactive	Leg B
731'	(1) Dipole	Decibel	DB 420-B (20' x 2"ø)	No Coax		721'	(1) Standoff (72")		
699'	(1) Dipole		DB 420-B (20' x 2"ø)	No Coax		689'	(1) Standoff (72")		
690'	(1) Dipole	Decibel	DB 420-B (20' x 2"ø)	42	(1) 1-5/8"	680'	(1) Standoff (72")	Liberty Ambulance	Leg A
680'	(1) TMA	Unknown	24" x 20" x 10"			680'	Direct Mount		
687"	(1) 2-Bay FM	PSI Inc.	LPD16/BH-15/18/556	13	(1) 3"	687"	(1) Standoff (24")	Channel 15	Leg C
663.5'	(1) Dipole	Decibel	DB 420-B (20' x 2"ø)	No Coax		653.5'	(1) Standoff (72")	Inactive	Leg B
644'	(1) Dipole	Decibel	DB 420-B (20' x 2"ø)	38	(1) 1-5/8"	634'	(1) Standoff (72")	Liberty Ambulance	Leg A
640'	(1) Dipole		DB 420-B (20' x 2"ø)	41	(1) 1-5/8"	631'	(1) Standoff (72")	Murphy Comm	Leg A
636'	(1) Dipole		DB 420-B (20' x 2"ø)	35	(1) 1-5/8"	627'	(1) Standoff (72")		Leg B
636'	(1) Dipole	Decibel	DB 420-B (20' x 2"ø)	37	(1) 1-5/8"	627'	(1) Standoff (72")	Inactive	Leg C
630'	(1) Dipole		(4) Element (20' x 2"ø)	15	(1) 7/8"	620'	(1) Standoff (84")		Leg A
618.5'	(2) Strobes	Flash Tech	FH 307-1	(1) Light Conduit		617.5'	(2) Standoffs (17")	SBA	Legs A&C
610'	(3) Strobes		20" x 20" x 12"	(1) Light Conduit		610'	Direct Mount		All Legs
571'	(1) Empty Mount			No Coax		571'	(1) Empty Standoff (12.5')		Leg C
550'	(3) Empty Mounts			No Coax		550'	(3) Empty Antenna Brackets		All Legs
514.5'	(3) Flat Panels	MTI	MT-484034/NV	47-49	(4) 1/4"	513.5'	(3) Pipe Mounts (54" x 2"ø)	Fox 30	
512.5'	(3) TMAs	Alvarion	12" x 4.5" x 2"			500.5'	(3) Empty Pipe Mounts (60" x 2.4"ø)		
500.5'	(3) Empty Mounts			No Coax		500.5'	(3) Empty Pipe Mounts (60" x 2.4"ø)		
493'	(1) Yagi	Unknown	48" x 36"	9	(1) 7/8"	493'	(1) Standoff (36")	Corner Room	Leg A
491.5'	No Antennas			10	(1) 3/8"	No Mount		Inactive	AB Face
471.5'	(1) Grid Dish	CSA Wireless	72"ø Dish	44	(1) 7/8"	471'	(1) Pipe Mount (30" x 3.97"ø)	Lighting Bldg.	Leg C
467'	(3) Markers	Flash Tech	L-810 (Incandescent)	(1) Light Conduit		467'	(3) Standoffs (7")	SBA	All Legs
415'	(1) Omni	Decibel	DB 589 T6	22	(1) 7/8"	420'	(1) Standoff (72")	JEA Building	Leg C
425'	(1) Omni		DB 589 T6	6	(1) 7/8"				

APPURTENANCES (2)

Antenna elevations are measured from mid-rad on all antennas.
Elevation on mounts are measured to the mid-elevation of the point where the mount attaches to the tower.
Antennas are listed from highest mounted position to lowest mounted position on tower.

Antenna Elevation	Qty & Type	Manufacturer	Model or Size	Coax #	Coax Qty & Size	Mount Elevation	Mount Qty, Size and Type	Carrier/ Notes	Mounting Location
402'	(2) TMAs	Unknown	16" x 6" x 6.5"	14, 19	(2) 7/8"	402'	Direct Mount	JEA Building	BC Face
409'	(2) Omnis	Decibel	TDF 1080A	20-21	(2) 1/2"	400'	(2) Standoffs (72")		Legs B&C
387.5'	(3) Omnis		TDF 1080A	16-18	(3) 1-1/4"	376'	(3) Standoffs (72")		All Legs
306.5'	(2) Strobes	Flash Tech	FH 307-1	(1) Light Conduit		305.5'	(2) Standoffs (17")	SBA	Legs A&C
300.5'	(3) Strobes		20" x 20" x 12"	(1) Light Conduit		300.5'	Direct Mount		All Legs
277'	(1) Omni	Decibel	ASP-705K	31	(1) 7/8"	267'	(1) Pipe Mount (60" x 2.97"ø)	Fox 30	Leg C
268'	(1) TMA	Unknown	10" x 8" x 4"						
266.5'	(1) Grid Dish	RSI	P-9A72GN						
258'	(3) Empty Mounts			No Coax		258'	(3) Empty Antenna Brackets		All Legs
248'	(1) Grid Dish	Scala	36" x 72"	45	(1) 7/8"	248'	(1) Pipe Mount (63" x 2.4"ø)	Fox 30	Leg A
222'	(1) J-Box	Unknown	10" x 12" x 6.25"	51-54	(1) 1/2" (2) 3/8" (1) 1/4"	222'	Direct Mount	Hogan	Leg A
213'	(1) Empty Mount			No Coax		213'	(1) Empty Pipe Mount (36" x 2.4"ø)		Leg C
211'	No Antennas			1	(1) .12"		No Mount	Inactive	AB Face
172.5'	(1) Empty Mount			No Coax		172.5'	(1) Empty Pipe Mount (38" x 2.4"ø)		Leg A
162'	(3) Panels	Kathrein	840 10054	3-5 7-8	(2) 2.3" (2) 1/2" (1) 1/4"	161.5'	(3) T-Frames (24" x 72")	Cleanwire	All Legs
162'	(5) TMAs	Motorola	WAP25450 (23" x 6" x 5.5")						
165.5'	(2) Dish	Andrew	P2F-52-NXA						
165.5'	(1) Dish		VHLP2.5-18-DW1						
165.5'	(1) Dish		VHLP800-11-DW1						
163'	(2) TMAs	Redline	7.5" x 11.5" x 2"						
159.5'	(4) TMAs	Unknown	5" x 13.5" x 2"						
160'	(3) Markers	Flash Tech	L-810 (Incandescent)	(1) Light Conduit		160'	(3) Standoffs (7")	SBA	
157'	(1) Yagi	Scala	YA5900	11	(1) 5/8"	157'	(1) Pipe Mount (12" x 2"ø)	WJCT	Leg A
154.5'	(1) Dish	Radiowaves	SP2-5.2NS	55	(1) 1/4"	153.5'	(1) Pipe Mount (54" x 2.4"ø)	Hogan	Leg C
153.5'	(1) TMA	Alvarion	12" x 4.5" x 2.25"	43	(1) 5/8"	151'	(1) Pipe Mount (12" x 2"ø)	Corner Room	Leg A
151.5'	(1) Yagi	Scala	T4-900	24	(1) EW52	144'	(1) Pipe Mount (63" x 4.5"ø)	JEA Building	Leg C
144'	(1) Dish	Andrew	PAR6-59-PXA/B	34	(1) EW65	134.5'	(1) Pipe Mount (50" x 3.98"ø)	WJCT	
134.5'	(1) Dish	RFS	8"ø Dish	46	(1) 1/4"	134'	(1) Pipe Mount (60" x 4.5"ø)	Fox 30	Leg A
135'	(1) Dish	Gabriel	128871	50	(1) 1/2"	116'	(1) Pipe Mount (66" x 1.6"ø)	Unknown	Leg B
136'	(1) TMA	Unknown	12" x 12" x 4"	25	(1) 7/8"	108.5'	(1) Pipe Mount (20" x 2.4"ø)	T-Frame Near B-Leg	Leg C
116'	(1) Yagi	Scala	84" x 64"	26	(1) 7/8"				
105.5'	(1) Omni	Laird	FG 9023	27	(1) 7/8"				
102.5'	(1) Omni		FG 9023	28	(1) 7/8"				
111.5'	(1) Omni		FG 9023						
114.5'	(1) Omni		FG 9023						
87.5'	(1) Dish	Radiowaves	WPS-11DW2	32	(1) 3/8"	87.5'	(1) Pipe Mount (60" x 2.88"ø)	Inactive	

As the following picture shows, the complexity and duration of a main antenna change for WFOX would be further increased due to the existing configuration of the top-mounted antennas on the tower, *i.e.*, a tower top-mount antenna on the bottom of a stacked array.



Work on the tower would be limited to overnight/off hours because the existing antenna is in the other TV and FM stations' RF apertures. Further, in CMG's experience, any prolonged required power downs of other stations' facilities will result in responses ranging from lack of cooperation to, in the worst case scenario, litigation. Moreover, since CMG does not own the tower, it has limited ability to compel cooperation from other tower tenants that have no financial or legal incentive to cooperate with the transition.

SECOND SITE DEVELOPMENT

For these above reasons, CMG assumes that if WFOX is assigned a new channel as part of the transition, an offsite auxiliary (interim) site likely must be developed to ensure continuity of service to the viewers and other consumers that depend on services provided from this tower. CMG will not know until the post-auction channel assignments are issued whether it will need to change channels. If WFOX does change channels, CMG will need to gain access to a second tower site on an interim basis before it is required to begin operations on a new channel. This will not be a quick or an easy process.

If an offsite interim location is needed by CMG (or any other broadcaster currently using the Jacksonville tower), there is a potential site available that can be used for a leased auxiliary tower. Parties would need to conduct and complete site lease negotiations with the site owner before equipment could be ordered. While the tower would not be suitable as-is, with leg reinforcement and guy tensioning the tower could be G rated, thus meeting state and federal standards. Local permitting also would be required.

Maintenance repairs are required on the proposed interim tower, including guy wire corrosion mitigation, damaged tower member replacement and tower mast cleaning and recoating. All structural changes made to the tower would need to be performed by individuals professionally trained in tower erection and post-erection modifications. The parties also would need to perform a pattern study and develop antenna recommendations. To assure safety and maximum tower service life, an engineering review for all proposed lifting plans and/or special construction considerations would be required prior to the commencement of any work.

Once the plans are set, the parties would need FAA approval to use a new auxiliary top mount antenna. Once approvals are granted, the parties would remove the existing top mount antenna, perform the recommended tower remediation, and install the new top mount antenna and transmission line. They will also need to install new a transmitter, STL, filters and combiners and then test the entire system. Once all the new equipment is in place, they will commence station operations from the auxiliary site, and then repeat the sequence of work all over again on the main site. Accomplishing all of these tasks during the 39-month construction period (assuming WJAX is allotted the maximum period for construction), when many hundreds of TV stations will be competing for scarce construction resources, will be a remarkable challenge.

EXHIBIT C

RF Issues at South Mountain, Phoenix AZ



Most television stations in the Phoenix metropolitan area, including Meredith's KPHO-TV, have their transmission towers on South Mountain, a mountain range located just south of the City of Phoenix (pictured above). The communications site at South Mountain is owned by the City of Phoenix and is a Homeland Security site. All access to the site is restricted and only persons who have a City of Phoenix government-issued ID badge may enter. The attached drawing of the site provides detail on the number and diversity of towers involved and the complexity of the South Mountain site.

As the attached map shows, the site contains more than 30 towers consisting of FM radio, television, mobile wireless and microwave transmitters. Because of the number of towers on the site, there must be close collaboration with all site users to maintain safe RF levels for all workers on the towers. There is a South Mountain Users Association ("SMUA") group to which everyone on the mountain belongs. An email distribution list was set up years ago to facilitate communication related to the site so that all parties can coordinate RF levels. The use of the email distribution list is imperative to keep all informed of the progress of a project, such as when to power down or switch to auxiliary antennas or transmitters and when it is "all-clear" to go back to full power.

"All safe" RF level calculations are located in the Hammett and Edison, Inc. RF study of 2014. Tower crews typically also have personal RF monitors that allow them to make adjustments in power levels so that they can work in real-world situations. With so many towers in close proximity to each other, crews must spend considerable time to coordinate the reduction of power in the affected systems. Depending on the work being performed, some licensees will go to auxiliary transmitters and/or antennas when climbers need access to areas in the aperture of their main antennas. This requires constant communication between the tower crews and all

affected systems. Often, station personnel must be on site when the work is being performed. Having staff on site is also the only way for some stations to switch to auxiliary antennas and the best way to keep in close contact with what work is being done.

Any changes in frequency and power levels must be approved by the SMUA RF and Technical Committee. While the City of Phoenix typically goes along with the committee's recommendations, this can be a lengthy process if many users are affected. The City of Phoenix also has its own permitting process that can delay construction timelines. The SMUA has not yet determined how it will coordinate on the post-auction transition process, in part because television stations have been reluctant to discuss their plans during the "quiet period" under the Commission's anti-collusion rule. Accomplishing the planning, coordination, and government approvals necessary during the 39-month construction period will strain the physical and logistical resources of all stations involved.

